

in response to Applicant's earlier traversal arguments regarding claim 1, the Examiner has now applied a newly cited secondary reference, US 3,723,797 to Andersson. The Examiner has otherwise maintained the rejections *verbatim* from the original June 27, 2002 Office Action.

Further, the Examiner has taken the position, in the "Response to Arguments" section of the instant Office Action, that "Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new grounds of rejection."

However, Applicant respectfully submits that the Examiner's position ignores the separate traversal arguments put forth in the August 30, 2002 Amendment regarding dependent claims 3-9 (and again discussed in detail below). Applicant respectfully submits that these separate arguments are not rendered moot by the limited use of US 3,723,797 to Andersson by the Examiner. Specifically, the Examiner has not explained how the features identified by the Applicant as missing from the original rejections of claims 3-9 would be disclosed by this newly cited reference, nor, in fact, has responded in any way to these separate traversal arguments.

Thus, Applicant respectfully submits that the Examiner has still failed to *establish prima facie* obviousness for *at least* dependent claims 3-9.

Obviousness Rejections of Claim 1 Under 35 U.S.C. § 103(a)

The Examiner has rejected claims 1-4 under 35 U.S.C. § 103(a) as being unpatentable over Oshita (US 6,028,383; hereinafter "Oshita") in view of Andersson (US 3,723,797; hereinafter "Andersson"). This rejection is respectfully traversed.

The Applied References

Oshita discloses a stator structure of a resolver (see FIG. 2) with multilayered iron core 1, tooth portions 2, slots 3, insulation member (cap) 4, and stator windings 5. Extended insulating portion 10 is also provided along with a plurality of pins 11. Lead wire 7 with connector 6 is connected to the extended portions 11a of the respective pins 11, which are also connected to stator windings 5.

Andersson discloses a method of insulating a “conductor arranged in a slot in the rotor or stator of an electric machine” (see col. 1, lines 7-9) that “reduces inner spaces where corona may occur” (see col. 1, lines 31-32). The conductor is comprised of (see FIGS. 1-4) a copper conductor 10, conductor insulation 11 added by enameling with a terephthalic acid alkyd. A resinous binder 12 consisting of a polyamide-modified epoxy resin is applied. Finally tape 13, 14 consisting of mica flakes and short fibers of an aromatic polyamide, is applied. A bundle of these conductors are wrapped with mica tape 25, impregnated with epoxy resin, placed in a molding tool, cured, and then inserted into machine slot 38.

The Examiner's Position Regarding Claim 1

The Examiner takes the position that Oshita discloses all of the features of claim 1, except that Oshita fails to disclose “the stator coils impregnated with liquid resin and the free ends of the coil wrap around the plurality of terminals.” (see O.A., numbered paragraph 2).

Thus, the Examiner applies Andersson to allegedly provide such missing features, taking the position that “Andersson teaches in fig. 1 an insulating coil arrangement comprising: stator coils (10) impregnated with silicon resin. Where in [sic] the silicon resin remains soft for the

purpose of insulating the coils. Therefore it would have been obvious to one having ordinary skill ... to modify the resolver stator of Ohshita with teaching [sic] Anderson insulating coils for the purpose of improving insulation.”

Applicant's Response Regarding Claim 1

As an initial matter, Applicant respectfully submits that the Examiner has failed to identify any specific motivation to modify the structure of Ohshita with Andersson. It has long been held that the “mere fact that references can be combined or modified does not render the resultant combination [or modification] obvious unless the prior art also suggests the desirability of the combination [or modification].” *In re Mills*, 916 F.2d 680 (Fed.Cir. 1990); MPEP §2143.01.

Specifically, the Examiner has identified “improving insulation” as a reason for modifying Ohshita in view of Andersson. However, Applicant respectfully submits that the Examiner has not identified any insulation in Ohshita that could have been “improved.”

In fact, in direct contrast to the stator windings 5 on tooth portions 2 disclosed in Ohshita, Andersson is directed towards the specific improvement of the insulation surrounding a bundle of conductors “in a slot in the rotor or stator of an electric machine.” (see col. 1, lines 7-9 and FIGS. 1-4). Ohshita is *not* concerned with, and does not even *mention*, such slots, or even any bundles of connectors that could be provided in such a position so as to utilize the Andersson insulation method. Nor, in fact, is there any teaching or suggestion that the Andersson insulation method would provide *any* improvement in insulation in Ohshita, *even* if it could be used.

Thus, Applicant respectfully submits that the Examiner has failed to identify any motivation to modify Ohshita in view of Andersson, and therefore requests that the Examiner withdraw this rejection.

Further, Applicant respectfully submits that, even if Oshita could somehow have been modified in view of Andersson, the resultant combination would *still* be deficient, as it would fail to teach or suggest at least “the stator coil being impregnated with a liquid or melted resin and fixed to the magnetic poles by curing the resin, wherein the resin is softer than an epoxy,” as recited in claim 1.

Specifically, Applicant respectfully submits that the Examiner’s position that Andersson discloses, in FIG. 1, “an insulating coil arrangement comprising stator coils (10) impregnated with silicon resin,” is completely unsupported by any reading of Andersson. In contrast, as discussed above, FIG. 1 *actually* discloses a copper conductor 10 with insulation 11 applied by enameling (with a terephthalic acid alkyd) and to which a polyamide-modified *epoxy* resin binder 12 and mica/aromatic polyamide tape 13,14 is applied. A bundle of these conductors are wrapped with mica tape 25, impregnated with *epoxy* resin, placed in a molding tool, cured, and then inserted into machine slot 38. (*see* FIG. 4).

Applicants respectfully submit that Andersson only discloses the use of *epoxy* resins, which clearly do not teach or suggest any use of resins “softer than an epoxy,” as recited in claim 1. Further, in contrast to claim 1’s recital that the resin is used to “to impregnate the stator coil and fix it to the magnetic poles,” the resins disclosed in Andersson are utilized only to insulate the wire bundles.

Thus, Applicant respectfully submits that the Examiner has failed to establish *prima facie* obviousness of claim 1, as it has long been held that, in order “to establish *prima facie* obviousness of the claimed invention, all the claim limitations must be taught or suggested by the prior art.” *In re Royka*, 490 F.2d 981 (CCPA 1974). Therefore, Applicant respectfully requests that the Examiner withdraw this rejection.

Dependent Claims 2-10

Applicant respectfully submits that claims 2-10 are believed to be allowable, at least by virtue of their dependency. Further, as discussed both above and in the August 30, 2002 Amendment, Applicant respectfully submits that *at least* the following claims are believed to be separately patentable over the applied references.

Claims 3 and 4 recite a specific connection structure wherein “wire ends of the stator coil [are] wound around” one of a plurality of terminals to form a “wire connecting part.” This wire connecting part has two portions. The first portion is where “the wire end and the terminal are fixed to each other by soldering or fusing,” and the second portion is where the wire end and the terminal are “independent from each other” to form a “free wire end.” (e.g. only, see FIG. 8).

However, Applicant respectfully submits that the Examiner has still not rejected these portions (or any other portions of claims 3 and 4 for that matter) with any specificity, and thus has not established *prima facie* obviousness of these claims.

Further, Applicant respectfully submits that there is simply no teaching or suggestion in either Ohshita or Anderson of such features. Anderson is silent regarding any terminals or wire ends, and Ohshita is silent regarding any structural features of the connection between terminals

11 and any wire ends of the stator coils (as the Examiner agrees in numbered paragraph 2 of the Office Action).

Thus, Applicant respectfully submits that the rejections of claims 3 and 4 are still invalid on their face, as the Examiner has not established *prima facie* obviousness. Therefore, Applicant respectfully requests the Examiner to withdraw the above rejection.

Obviousness Rejections of Claims 5-9 Under 35 U.S.C. § 103(a)

The Examiner has rejected claims 5-9 under 35 U.S.C. § 103(a) as being unpatentable over Oshita in view of Andersson in further view of Fukaya (US 5,057,732; hereinafter “Fukaya”). This rejection is respectfully traversed.

Oshita and Andersson are fully discussed above. Fukaya discloses (see FIG. 2) a coil bobbin 2 with coil wires 4a-4d “conductively fixed” (col. 3, lines 41-48) to connector plates 3a-3c, but is otherwise silent on the features of that connection.

Thus, Applicant respectfully submits that Fukaya fails to teach or suggest any wire connecting part that has both a first portion where “the wire end and the terminal are fixed to each other by soldering or fusing,” and a second portion where the wire end and the terminal are “independent from each other” to form a “free wire end.” In contrast, Fukaya only discloses the connection between wires 4a-4d and plates 3a-3c as being “conductively fixed.” In other words, while Fukaya does show some wrapping of a wire around connector plates 3a-3c, there is no teaching or suggestion that, in those areas, there is both a portion where “the wire end and the terminal are fixed to each other” and a “free wire end,” as recited in claims 3 and 4.

Thus, Applicant respectfully submits that Fukaya fails to disclose the features noted above as missing from Oshita and Andersson with respect to the rejection of claims 3 and 4. Applicant further submits that claims 5-9, which are dependent from either claim 3 or 4, are believed to be allowable, *at least* by virtue of that dependency.

Further, Applicant respectfully submits that claim 9 is separately patentable over the applied references, as Fukaya does not teach or suggest that the free wire end has "a resilient function and slack," as recited in claim 9.

Specifically, as discussed above, Fukaya is simply silent on any specific description of the connection between coil wires 4a-4d and the connector plates 3a-3c. Further, the illustration in FIGS. 2 and 3 of what seems to be a wire wrapped around the contacts 3a-3c shows the wire wrapped tightly around the contacts throughout their length. Thus, Applicants respectfully submit that such a tightly wrapped wire simply cannot provide the "resilient function" or "slack" recited in claim 9.

Thus, Applicants respectfully request that the Examiner withdraw this rejection.

Conclusion

In view of the foregoing, it is respectfully submitted that claims 1-10 are allowable. Thus, it is respectfully submitted that the application now is in condition for allowance with all of the claims 1-10.

If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Response Under 37 C.F.R. § 1.111
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Please charge any fees which may be required to maintain the pendency of this application, except for the Issue Fee, to our Deposit Account No. 19-4880.

Respectfully submitted,



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